

Title (en)
BIT FOR DRILLING AN UNDERCUT HOLE

Publication
EP 0395335 B1 19930616 (EN)

Application
EP 90304337 A 19900423

Priority
JP 10418889 A 19890424

Abstract (en)
[origin: EP0395335A1] A drill bit has an extendable and retractable undercut portion for the drilling of undercut holes, for example to accommodate anchor bolts in concrete. The device includes a drill bit (18) for drilling an initial hold (B) to a predetermined depth at which stage a flange (12) on a guide sleeve (10) contacts the surface (A) of the workpiece. Further downward movement of the drill bit which is securely attached to a lower shank (4) of a body (1), causes relative upward movement of the guide sleeve (10) around the body (1). This in turn causes drive balls (17) accommodated within the flared upper end (11) of sleeve (10) to move inwardly and force apart tapered surfaces (3) and (6) on the body (1) and a slide sleeve (5) disposed between the shank (4) and sleeve (10). The slide sleeve (5) which carries dependent fingers (22) within flutes (20) along the length of the bit (18), thus moves down relative to the bit, forcing the lower ends of the fingers (22) over tapered lower ends (21) of the flutes, exposing cutting edges (24) on the ends of the fingers to grind an annular undercut groove (C) in the hole (B).

IPC 1-7
B23B 29/034; B28D 1/14

IPC 8 full level
B23B 51/00 (2006.01); **B28D 1/14** (2006.01)

CPC (source: EP US)
B23B 51/0045 (2013.01 - EP US)

Cited by
EP0795368A3; US5810523A; EP3885092A4; US7264427B1; EP0722801A3; CN111283881A; EP0729802A1; US5735650A; AU698900B2; US6543971B2; GB2529109A; GB2529109B

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0395335 A1 19901031; EP 0395335 B1 19930616; AU 5382990 A 19901025; AU 619106 B2 19920116; DE 69001951 D1 19930722; DE 69001951 T2 19930923; HK 1006291 A1 19990219; JP 2598515 B2 19970409; JP H02281907 A 19901119; US 4998981 A 19910312

DOCDB simple family (application)
EP 90304337 A 19900423; AU 5382990 A 19900424; DE 69001951 T 19900423; HK 98105437 A 19980616; JP 10418889 A 19890424; US 51356390 A 19900424